SDG STRUCTURED DIALOGUE REPORT

Contents

List of Acronyms

ABI	Association of Bhutanese Industries
APIC	Agency for Promotion of Indigenous Crafts
BCCI	Bhutan Chamber of Commerce and Industry
BNCA	Bhutan Narcotics Control Authority
BNLI	Bhutan National Legal Institute
CCCC	Climate Change Coordination Committee
CDB	Construction Development Board
CI	Climate Information
COP	Conference of Parties
CSOs	Civil Society Organizations
DDM	Department of Disaster Management
DGM	Department of Geology and Mines
DHI	Druk Holding & Investments
DHS	Department of Human Settlements
DMEA	Department of Macroeconomic Affairs
DoFPS	Department of Forests and Park Services
DoHS	Department of Hydromet Services
DRA	Drug Regulatory Authority
DRE	Department of Renewable Energy
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
FEMD	Flood Engineering Management Division
FYP	Five-year plan
GCF	Green Climate Fund
GCM	General Circulation Models
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GLOF	Glacial Lake Outburst Flood
GNH	Gross National Happiness
IPCC	Intergovernmental Panel on Climate Change
KGUMSB	Khesar Gyalpo University of Medical Sciences of Bhutan
KPIs	Key Performance Indicators
LDC	Least Developed Country
LEG	Least Developed Countries Expert Group
LGs	Local Governments
MFCTC	Macroeconomic Framework Coordination Technical Committee
MoAF	Ministry of Agriculture and Forests
MoEA	Ministry of Economic Affairs

MoF	Ministry of Finance
MoH	Ministry of Health
MoHCA	Ministry of Home and Cultural Affairs
MoIC	Ministry of Information and Communications
MoLHR	Ministry of Labor & Human Resources
MoWHS	Ministry of Works and Human Settlement
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Actions
NCHM	National Center for Hydrology and Meteorology
NDCs	Nationally Determined Contributions
NEC-S	National Environment Commission Secretariat
NKRAs	National Key Result Areas
NLC	National Land Commission
NSB	National Statistics Bureau
OAG	Office of the Attorney General
PLAMs	Planning and Monitoring System
PRECIS	Providing Regional Climates for Impacts Projects
RCoJ	Royal Court of Justice
RGoB	Royal Government of Bhutan
RMA	Royal Monetary Authority of Bhutan
RSPN	Royal Society for Protection of Nature
RUB	Royal University of Bhutan
SDGs	Sustainable Development Goal
SWOT	Strength Weaknesses Opportunities and Threats
TCB	Tourism Council of Bhutan
TWG	Technical Working Group
UN	United Nations
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
WMD	Watershed Management Division

1. Introduction

Bhutan adopted, along with the global community "The 2030 Agenda for Sustainable Development Goals (SDGs)" in 2015. The SDG goals are very strongly aligned to the development philosophy of GNH. Moreover, Bhutan began early implementation of the SDGs since its adoption. The country follows a five-year planning (FYP) cycle that outlines the socio-economic development priorities and programmes to be implemented over a period of five years that have a high level of coherence with the SDGs. In the 11th FYP (2013-2018), the country prioritized three SDGs (Goal 1 – No Poverty; Goal 13 – Climate Action; and Goal 15 – Life on Land) for implementation. But in the 12th FYP nearly all SDGs are closely aligned in terms of targets and indicators being integrated into them. This has allowed for Bhutan's longer-term development vision to be in-line with the SDGs. The 12th FYP strategizes for achieving these global goals, laying out concrete and specific targets for Bhutan's development progress by 2023.

The 17 National Key Result Areas (NKRAs) of the 12th FYP have the following SDG overlaps:

S. No	NKRAs	SDGs
1	Macro-economic Stability Ensured	[8] Decent Work and Economic Growth
2	Economic Diversification	[8] Decent Work and Economic Growth [9] Industry, Innovation and Infrastructure
3	Reducing Poverty and Inequality	[1] No Poverty [10] Reduced Inequality
4	Culture and Tradition Preserved and Promoted	[11] Sustainable Cities and Communities
5	Healthy Eco-system Enhanced	11] Sustainable Cities and Communities [15] Life on Land
6	Carbon Neutral, Climate and Disaster Resilient Development Improved	[7] Affordable and Clean Energy [9] Industry, Innovation and Infrastructure [13] Climate Action
7	Quality of Education and Skills Improved	[4] Quality Education
8	Food and Nutrition Security	[2] Zero Hunger
9	Infrastructure, communication & Public Services	9] Industry, Innovation and Infrastructure [16] Peace, Justice and Strong Institutions
10	Gender Equality	[4] Quality Education [5] Gender Equality [8] Decent Work and Economic Growth
11	Productive & Gainful Employment	[8] Decent Work and Economic Growth
12	Corruption Reduced	16] Peace, Justice and Strong Institutions
13	Vibrant Democracy & Decentralisation	16] Peace, Justice and Strong Institutions
14	Healthy and Caring Society	[3] Good Health and Well-being
15	Sustainable Human Settlements	[6] Clean Water and Sanitation [11] Sustainable Cities and Communities
16	Justice Services	[16] Peace, Justice and Strong Institutions
17	Sustainable Water	[6] Clean Water and Sanitation

The NAP and Agenda 2030, defining the Sustainable Development Goals (SDGs), both recognise and provide the enormous opportunity to leverage the interlinkages between the many goals/targets contained within them allowing for greater resource and implementation efficiency. NAP can enable Bhutan to harmonize addressing SDGs, NKRAs (development, disasters, etc) with activities designed to address adaptation in a country-driven manner. This allows for multiple co-benefits and synergies for increasing overall resilience.

1.1. Why build NAP-SDG/NKRA synergies?

For an effective commitment to both the Paris Agreement and 2030 UN Sustainable Development Agenda, there is an increased/dual role for the Ministries/Commission, and climate sensitive sectors In Bhutan. As these institutions move into achieving both development and climate targets, a deeper understanding of the points of intersection between the climate and development agendas is needed. This will help in improving strategic choices where insights into climate-development interactions are key for effective policies to serve both.[1]

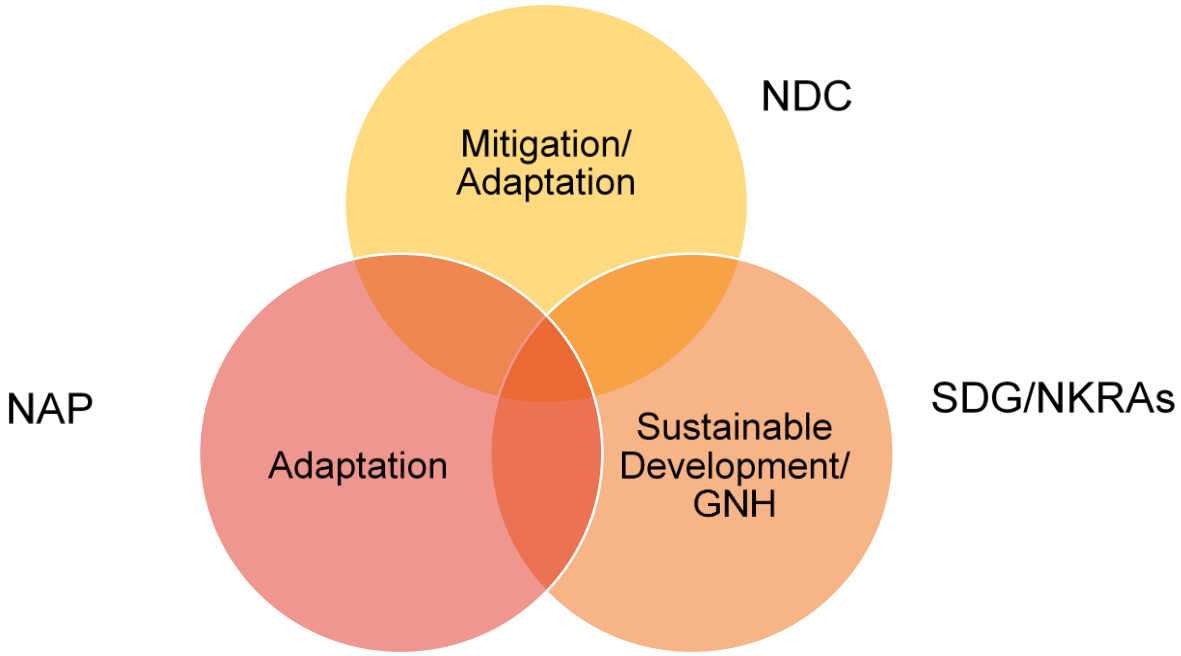

Figure 1: Overlaps and synergies in the plans/ agendas

The NDC and NAP can be complementary and mutually supportive. The NDC provides high-level direction and principles for climate action, while NAP processes elaborate adaptation options and strategies for implementation.[2] In Bhutan's context the NDC, like other countries, is a pledge for meeting the goals of the Paris Agreement, including for adaptation. The NAP process on the other hand is a domestic planning process that allows to identify, address and review adaptation needs while advancing implementation of adaptation measures. As mentioned earlier, SDGs in Bhutan have been translated into the 17 National Key Result Areas (NKRAs) in the 12th FYP covering multiple elements of adaptation in Bhutan. This makes these three processes complementary and creates entry points that represent a feasible starting point and can provide a strong foundation for alignment and implementation of adaptation actions (Figure 1).

Additionally, there have been multiple studies done since the adoption of Agenda 2030 and the Paris Agreement that identifies the synergies and potential trade-offs between different goals as also the strength of these inter-linkages. (See Le Blanc, D. (2015)[3]; International Council for Science (2016)[4]; NAP Global Network[5]) Some of the key benefits of inter-linking SDGs/NKRAs and NAP are:

[1] http://ambitiontoaction.net/wp-content/uploads/2018/05/NDC-Upadate-Report-May-2018.pdf
[2] Alignment to Advance Climate-Resilient Development, 2019, NAP Global Network
[3] https://www.un.org/esa/desa/papers/2015/wp141_2015.pdf
[4] https://council.science/cms/2017/05/SDG-interactions-working-paper.pdf
[5] http://napglobalnetwork.org/2019/12/the-national-adaptation-plan-nap-process-frequently-asked-questions/

1. **Improve development practice and outcomes:** NAP processes assist in integrating climate risk and priority adaptation actions into development plans and budgets. This allows for directing investments into resilient solutions and help in adjusting development pathways to minimize vulnerabilities. It helps in including adaptation in development planning reducing the possibility of investments being lost.
2. **Improve access and use finance for adaptation:** Commitments to adaptation finance are increasing across the world. A NAP process helps in identifying priorities for adaptation and their subsequent financial needs. This communicates at the international level that the country has invested in the institutions and practices needed to channel and use this funding effectively.
3. **Helps implementation of the Paris Agreement:** Bhutan's Nationally Determined Contributions (NDCs), has elements of both adaptation and mitigation. Considering the complementary elements between them, NAP process and/or documents can help prepare the adaptation section of the biennial report or the Fourth National Communication.
4. **Sustainable Development Goals (SDGs):** The 2030 Agenda for Sustainable Development reinforces the need for action on adaptation, both as a goal in and of itself and as a means to achieving other goals in areas such as food security and water. The NAP process provides a means to operationalize these goals. Further it also facilitates harmonized reporting on indicators for the SDGs and assessment of outcomes of the adaptation benefits

Bhutan requires extensive funding for NAP and some of its NKRAs/SDG targets as there are limited public budgets and weak engagement with the private sector at present. For NAP, a variety of dedicated international climate finance options have emerged (e.g. Green Climate Fund, Global Environment Facility, Adaptation Fund, bilateral). But these international public funds will not be sufficient to meet all needs related to climate resilience. Most of the SDG targets for a lot of LDCs require additional finance above and beyond national budgets.

1.2. Stocktaking for NAP

Stocktaking for NAP is one of the initial steps for the process as indicated in the NAP Technical guidelines by UNFCCC.[6] The purpose of the stocktaking is to "*take stock of current and past activities, in order to identify collected data and information, early results, existing arrangements and capacities, and to start building a community of adaptation practitioners at the national level that could become key contributors to the NAP process*.[7]" The stocktaking helps to identify critical institutional mechanisms and state of adaptation action in the country. There are seven success factors identified by GIZ (2016)[8], representing important steps in building an effective NAP process. These were derived from UNFCCC and LEG guidelines. From the seven the six selected for this exercise are as follows:

[6] National Adaptation Plans, Technical guidelines for the national adaptation plan process, LDC Expert Group, December, 2012
[7] National Adaptation Plans, Technical guidelines for the national adaptation plan process, LDC Expert Group, December, 2012
[8] GIZ, 2016, SNAP: Stocktaking for National Adaptation Planning; Assessing Capacity for Implementing NDCs

Climate Information	• Data about climate variability and change and associated impacts, vulnerabilities and adaptation options
Long-term vision and mandate	• A common understanding on long-term objectives for national and sub-national development taking climate change into account
Implementation	• Quality, quantity and strategic orientation of measures implemented on the ground for adaptation
Integration	• Process of integrating climate action & adaptation into development processes at all planning levels/ budgetary process
Participation	• Involvement of representatives from private entities, civil society and local community groups, including women representation
Monitoring and Evaluation	• Monitoring climate change impacts, financial resources, as well as monitoring and evaluating adaptation results

Figure 2: Success Factors for NAP (GIZ SNAP, 2016)

The SDG/NKRA interlinkage with the NAP can take place through these factors. The rationale being that during the stocktake the country assesses climate adaptation needs/ impacts in the NKRAs/ SDG and through the NAP process address those key issues. This will allow for dual benefits for the NKRAs/SDG when the NAP is being implemented.

Case Study: Leveraging Climate Change and SDG Interlinkages in Namibia

Namibia is one of the most arid countries south of the Sahara. Highly variable climatic conditions are the norm, and the country experiences frequent dry-spells and droughts with sporadic occurrences of flooding in water basins (NCCSAP, 2013). With a high poverty level of 25.1% and more than 60% of the food consumption of the country still dependent on international imports, makes them extremely vulnerable to global impacts of climate change.

Namibia's 5th National Development Plan clearly mentions creating interlinkages between economic progression, social transformation, environmental sustainability, good governance and climate resilient society. In order to implement this plan, the government regularly collects ground level data through Namibia Statistical Agency (NSA) and through qualitative research with the help of key data collectors. The Biennial Update Reports mention the importance of these data collection process, monitoring and its review progress as a key measure to implement SDGs and NDCs within Namibia. The data is regularly assessed and monitored at a local community level. Several Ministries are being involved in the implementation process of the SDGs in Namibia. Adaptation (NDC), SDG targets are processed and reported to the two key focal points viz. National Planning Commission, Namibia Statistics Agency.

The Ministries identified for SDG leads have designated a responsible Officer and an alternate for contributing on climate change through monitoring of their own ministerial activities in relation to the SDGs and to collect appropriate data for the GHG inventory/climate adaptation for reporting. Such a system allows for effective collecting and reporting to UNFCCC at a later level.

Example of an effective inter-linkage: Namibia's NDC has a specific focus through an adaptation side towards a 30 percent increase in food production. This is also covered under their SDG targets/ national targets. Five year targets are being placed within the NDC Partnership Plan and these five year targets are further connected to SDG 1 to a large extent. Thereby allowing increasing efficiency and reporting of overall developmental goals. '

Source: Background Paper: Leveraging Climate Change and SDG Interlinkages: Country Experiences, *TERI School of Advanced Studies for UN DESA*, March 2019

2. Approach and Methodology

A focussed group dialogue was conducted in Paro, Bhutan on 28th November 2019 on identifying key opportunities and risks that climate change poses to the NKRAs/SDGs. This exercise invited stakeholders from government agencies, academia, and Civil Society Organizations (CSOs) that are key to working on climate change.

During the dialogue, the groups deliberated on each NKRA and its strategy and the possible opportunities and risks that climate change had on it. The groups also re looked at the six success factors and worked on possible areas where NKRA/SDG related input maybe required (Annexure 1). This was used to finalize and present the key entry point and the organization working on NKRA/SDG to focus localizing it. The key objectives of the exercise were:

- Identify and analyze linkages between SDGs targets and adaptation planning for Bhutan, including opportunities for improved synergies;
- Gain a shared understanding of Bhutan's current development targets and strategies and take into consideration all the possible risks that climate change poses to achievement of the NKRAs/ SDGs; and
- Ensure that climate change risks for relevant SDGs goals and targets are included in the NAP stocktaking process

3. Findings

3.1. Opportunities and Risks

Climate variability and change pose risks across all sectors: biodiversity, economic systems, human health, resources and ecosystems, social and cultural systems. The NKRAs/SDGs provide opportunities for addressing these risks. A key objective of the NAP process should be to reduce the risks and take advantage of the opportunities provided by NKRAs /SDGs. Following SDG-NKRA target linkages have been derived from the 12th FYP.

NKRA	SDG	Strategy as per 12th FYP	Climate Risks on the NKRA	Opportunities	Lead Agency	Contributor
Macroeconomic Stability	[8] Decent Work and Economic Growth	● Broadening revenue base and streamlining tax administration. ● Instituting expenditure control measures on public constructions and procurement. ● Exploring additional concessional financing windows. ● Boosting private investment and savings.	Extreme climate event can impact economic growth through losses in various sectors. [9]	The NKRA aims for economic growth. A stronger economy could provide a cushion during extreme climate events through better public facilities (healthcare, social security etc.) and increasing adaptive capacity of the communities	MOF	MoEA & MFCTC (MoF, MoEA, GNHC, NSB, RMA, MoLHR, TCB)
Economic Diversification	[8] Decent Work and Economic Growth [9] Industry, Innovation and Infrastructure	● Attracting private and foreign investment ● Promotion of high value added Cottage and Small Industries (CSIs) ● Accelerating tourism sector	Studies have shown that tourism sector can be impacted by climate change through reduced tourist inflow, impact on biodiversity etc. causing reduced sector development.[10] Similarly there is a risk to CSIs as	Moving away/ having alternative livelihood from climate sensitive sectors such as farming reduces risk to rural communities from climate impacts. Thereby making this NKRA critical to increasing adaptive capacity.	MoEA	MoF, MoE, MoLHR, DRA, RMA, TCB, MoAF, DHI, LGs, Private Sector (BCCI),CSOs (Tarayana and Loden Foundations)

[9] https://www.nber.org/papers/w14132
[10] http://eu-macs.eu/outputs/tourism-faq/1-how-does-climate-impact-tourism/

NKRA	SDG	Strategy as per 12th FYP	Climate Risks on the NKRA	Opportunities	Lead Agency	Contributor
		development through diversification of products, services and amenities ● Diversifying into allied hydropower industries	well as the hydropower industry.			
Reducing Poverty and Inequality	[1] No Poverty [10] Reduced Inequality	● Target the poor ● Continue broad based social investments ● Implement specific pro-poor policy measures:	Poverty and climate change form a vicious cycle.[11] Disadvantaged groups suffer disproportionately from the adverse effects of climate change, resulting in greater subsequent inequality as they have low adaptive capacity and higher exposure to climate impacts.[12]	Effective implementation of specific pro-poor policy measures will help increase climate resilience of the most vulnerable.	GNHC	MoEA, MoF, MoLHR, TCB, LGs, MoAF, MoH, MoE, Tarayana Foundation, APIC.
Preservation of Culture	[11] Sustainable Cities and Communities	● Supporting important historical community-managed monasteries ● Including culture as a criterion for resource allocation to LGs. ● Promoting cultural industries as an economic enterprise.	Multiple studies have shown that climate change can damage and rush the degradation and the failure of heritage structures besides all other structures in at-risk areas.[13]	The resource allocation to LGs could be used for climate proofing of the heritage structures.	MoHCA	MoLHR, MoWHS, MoE, TCB, LGs, DDC, MoEA, MoH, MoAF Dratshang Lhengtshog, MoH, RUB(CLCS), MoIC and APIC.
Healthy Eco-system	[11] Sustainable	● Exploring innovative financing	● Wetland loss and fragmentation	There are direct benefits through increasing the	MoAF	NEC, MoEA, NLC, LGs, RSPN.

[11] https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf
[12] https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf
[13] https://www.sciencedirect.com/science/article/abs/pii/S1350630716308676

NKRA	SDG	Strategy as per 12th FYP	Climate Risks on the NKRA	Opportunities	Lead Agency	Contributor
	Cities and Communities [15] Life on Land	for sustainable management of protected areas. ● Initiating payment for ecosystem services. ● Strengthening research on biodiversity information. ● Promoting traditional knowledge and customary practices in conservation and sustainable use of biodiversity.	● Human Wildlife Conflict may increase due to encroachment on the ecosystem. ● Forest fire frequency increasing due to human activity and climate change	overall resilience of the ecosystem. They increase adaptive capacity of communities through: production/ provision of Timber and non-timber forest products, Local climate regulation, Protection of watersheds etc.[14]		
Carbon Neutral, Climate and Disaster Resilient	[7] Affordable and Clean Energy [9] Industry, Innovation and Infrastructure [13] Climate Action	● Mainstreaming environment in all sectoral and local government plans. ● Enhancing mitigation and adaptation to climate change. ● Exploring eco-friendly public transport system. ● Strengthening preparedness and response to both natural and man-made disasters.	● Increased capital cost when using renewable energy due to reduced river flow ● Uncertainty in the hydrological flow due to climate change ● GLOF/Flashflood increased extreme weather frequency and intensity due to climate change	● Access to clean energy and continuous electricity supply increasing adaptive capacity ● CCA can lead to enhanced preparedness/DRR	NEC-S (Climate) MoHCA (Disaster)	MoAF, MoWHS, MoEA, MoH, NCHM, MoIC, LGs MoWHS, CDB, BSB, LGs, MoE, MoH, NCHM
Quality Education and Skills	[4] Quality Education	● Developing and offering tertiary education level programmes to develop human	● Climate Change can make existing problems in schools worse (e.g., worsen indoor air quality due to mold growth or	● TVET and higher education can incorporate green business and climate resilient livelihood opportunities	MoE	MoLHR, RUB, KGUMSB, BCSEA, RIM, REC, RTC, YDF, ABS, Draktsho, DPAB,

[14] Munang et. Al, 2013, https://doi.org/10.1016/j.cosust.2013.02.002

NKRA	SDG	Strategy as per 12th FYP	Climate Risks on the NKRA	Opportunities	Lead Agency	Contributor
		resources with high end technical capacity related to climate change and environmental science Creating pathways between mainstream and vocational education. ● Transforming TVET for sustainable development. ● Strengthening ECCD and primary education.	heat extremes in previously cooler regions) ● Loss of crops, in addition to lack of storage spaces can cause disruption of food supply chains thereby impacting the School Feeding Program in Bhutan.	● Enhanced awareness in climate change and disaster adaptation		BoC, RCSC, BMHC
Food and Nutrition Security	[2] Zero Hunger	● Expansion and strengthening of irrigation system. ● Enhancing farm labour supply. ● Establishing network of post-production and marketing facilities. ● Strengthening price support for agriculture produce. ● Strengthening research and extension services.	There are multiple studies highlighting impact of climate change on food and nutrition security.[15] Some are given below: ● Cause failure of irrigation systems ● Disrupt food production, food processing, distribution and consumption ● Increased use of pesticides in farms and loss of crops due to	● Developing a climate resilient irrigation system can increase adaptive capacity ● This NKRA allows for developing marketing facilities/ price support etc. these help in climate-resilient agricultural value chains[16] ● There is also research that can allow for drought-resilient crop varieties, Crop diversification etc.	NEC(Water) MoAF (Food and Nutrition)	Water: MoAF, MoEA, LGs, MoH, DHI, MoWHS, NCHM, LGs Food and Nutrition: MoH, MoE, LGs

[15] http://www.fao.org/3/k2595e/k2595e00.pdf

[16] Mwongera C. et al. (2019) Climate-Smart Agricultural Value Chains: Risks and Perspectives. In: Rosenstock T., Nowak A., Girvetz E. (eds) The Climate-Smart Agriculture Papers. Springer, Cham: https://link.springer.com/chapter/10.1007%2F978-3-319-92798-5_20

NKRA	SDG	Strategy as per 12th FYP	Climate Risks on the NKRA	Opportunities	Lead Agency	Contributor
		● Farm mechanisation.	favorable breeding conditions for pests ● Climate change induced extreme events (hailstorms, extreme precipitation) or dry spells can cause crop and livestock losses	● Can improve overall Community livelihood		
Infrastructure, communication & Public Services	[9] Industry, Innovation and Infrastructure [16] Peace, Justice and Strong Institutions	● Exploring alternative mode of transports such as electric vehicles, rope ways, and cycling. ● Ensuring all-weather road network including blacktopping of remaining GC roads. ● Strengthening G2C Office. ● Streamlining public services through Whole-of-Government approach.	Can cause disruption of communication/ conveyance during and due to climate disasters	● There are opportunities of putting in place an EWS and climate advisory for farmers ● Climate resilient infrastructure such as roads provide opportunities for reliable transportation ● Access to clean energy and continuous electricity supply	MoWHS MoIC Cabinet	CDB, BSB, LGs LGs, MoWHS, MoF All Agencies and LGs (based on 50 services prioritized)
Gender Equality	[4] Quality Education [5] Gender Equality [8] Decent Work and Economic Growth	● Implement specific gender friendly support measures ● Mainstream gender into policies, plans and programme	Women may be more vulnerable to climate change.[17]	The NKRA provides opportunity to integrate gender into other key policies, plans and programmes	NCWC	All Agencies (public, private, Media and CSOs)
Productive & Gainful Employment	[8] Decent Work and Economic Growth	● Creating adequate gainful jobs by accelerating tourism sector growth and	● People whose livelihoods are dependent on climate - sensitive sectors and	Entrepreneurship opportunities based on research and innovation for	MoLHR	MoE, RUB, MoEA, MoIC, TCB, MoAF, LGs, KGUMSB and MoWHS

[17] https://unfccc.int/gender

NKRA	SDG	Strategy as per 12th FYP	Climate Risks on the NKRA	Opportunities	Lead Agency	Contributor
		production and manufacturing CSIs. ● Skilling the workforce ● Incentivising LGs to create jobs: ● Promoting entrepreneurship	people more exposed to climate risks are impacted the most ● Erratic climate patterns can affect employment opportunities in tourism	alternative livelihoods and green jobs		
Corruption Reduced	[16] Peace, Justice and Strong Institutions	● Mandatory mainstreaming of corruption reduction measures and KPIs into agencies' and LGs' plans. ● Strengthening corruption prevention measures both at individual and system level. ● Inculcating ethical behaviour among different sections of society and occupational groups. ● Strengthening institutional capacities of key law enforcement agencies	No direct or indirect risks	No direct or indirect opportunities	ACC	All Agencies (public, private, Media and CSOs)
Vibrant Democracy & Decentralisation	[16] Peace, Justice and Strong Institutions	● Implementing division of responsibilities framework. ● Implementing full-fledged annual grants at gewog level ●Promoting political	People's participation in democratic processes such as election, development activities etc. may be impacted by climate-induced hazards such as floods, landslides, windstorms	● Development of Gewog level climate resilient development plans ● Adaptation action implementation suited to Gewog level needs through direct annual grants	ECB (Democracy) Cabinet (Decentralization)	Democracy: All Agencies including Constitutional Bodies Decentralization: MoHCA, MoF, LGs, GNHCS

NKRA	SDG	Strategy as per 12th FYP	Climate Risks on the NKRA	Opportunities	Lead Agency	Contributor
		discourse on pledges.				
Healthy and Caring Society	[3] Good Health and Well-being	● Upgrading skills of health workers and ensuring adequate need-based deployment. ● Strengthening tertiary healthcare services including referral system. ● Strengthening healthcare services and facilities at dzongkhag and gewog level. ● Curbing non-communicable diseases.	Climate change impacts human health in multiple ways: ● Heat stroke due to increase in temperature ● Increase cases of vector and water borne diseases ● Skin diseases.	Health facilities improvement can help reduce the impacts. There are also opportunities for health early warnings utilizing climate services.	MoH	MoHCA, *Dratshang Lhentshog*, GNHCS, MoE, LGs, JDWNRH, KGUMSB, DRA, BNCA, BoC, NEC, BMHC
Sustainable Human Settlements	[6] Clean Water and Sanitation [11] Sustainable Cities and Communities	● Promoting green and energy efficient buildings. ● Mainstreaming measures to reduce vulnerability to disasters. ● Enhancing access to safe, inclusive and green public spaces. ● Improving efficiency and effectiveness of Thromde and municipality services.	● Occurrence of climate related natural hazards can damage human settlements ● Climate induced water scarcity resulting in poor sanitation and further impacting public spaces ● Risk of GLOF to hydropower and human settlements ● Risk of displacement of people causing impacts on other human settlements and increased drudgery	The disaster mainstreaming measures can reduce risk and impacts from climate change such as through enforcing green building codes for construction for future structure. There are opportunities to include increased quality of risk data at the local level as well as increased integration of climate adaptation into local development plans, etc.	MoWHS	MoHCA, NLC, NEC, MoIC, LGs, MoH
Effective Justice Services	[16] Peace, Justice and Strong Institutions	● Promoting ADR and mediation within communities. ● Harmonising	Delivery of general services may be impacted by climate hazards	● There is opportunity to reframe inconsistent laws with regards to environment and climate	Judiciary (RCoJ)	ACC, MoHCA, LGs, BNLI, JSW School of Law, NAB, NC, Media,

NKRA	SDG	Strategy as per 12th FYP	Climate Risks on the NKRA	Opportunities	Lead Agency	Contributor
		conflicting or inconsistent laws.		change adaptation, community collaboration ● Opportunity to understand issues of climate justice.		BNCA, DRA, OAG, Bhutan Transparency Initiative
Sustainable Water	[6] Clean Water and Sanitation	● Building and rehabilitating adequate and climate resilient water infrastructure. ● Improving drinking water quality and safety. ● Providing adequate irrigation water. ● Implementing water legislation and governance. ● Exploring creation of a dedicated water agency.	Water is directly impacted by climate change through multiple ways: ● Quality of river and other water storage sources can have increased pollution ● Quantity of water through drying/ shrinking of water sources including inaccessibility	● This is a direct climate adaptation measure with climate resilient water infrastructure development. ● It can also strengthen water legislation and governance for providing 24 hours safe drinking water (rural/urban) ● Opportunities exist for assessment of alternative sources of water	NECS	NCHM, Thromdes, and Dzongkhags, MoH, MoAF, MoWHS

3.2. Possible Entry Points

The Gross National Happiness Commission Secretariat (GNHCS), is the central planning and coordinating agency, ensures that policies, plans and programmes are formulated and implemented in Bhutan. Further it is responsible for localizing the SDGs. The NECS is a high-level autonomous agency of the Royal Government of Bhutan and is mandated to look after all issues related to environment in Bhutan, it is also the key implementing agency of the NAP. While a clear opportunity exists to streamline and leverage SDGs and NAP processes to improve adaptation planning and action, the starting point for doing so may not be entirely clear. NDC could provide a basis for establishing and building a NAP process. These entry points are critical for fostering greater complementarity between NAP and SDGs/NKRAs. The SDG localization team (GNHCS) may suggest elements in the NAP process that will help address climate risks and opportunities for the development plans/ NKRAs.

The starting point for identification of the NKRAs was the water sector as it is considered very vulnerable, and thus important, through Bhutan's NDC. Further, all the NKRAs were reviewed to identify outputs/strategies that can support adaptation in the water sector. The review focused on outputs/ strategies that specifically were covered under SDG 6: Clean Water and Sanitation. Subsequently, the key NKRAs for entry points identified were 15 and 17. The NKRA output/ strategy was identified as adaptation if the description, or key performance indicator included one of the following terms: adaptation, NAP, resilience, vulnerability, climate risk; or the action was clearly an adaptation action, such as early warning systems, hydrometeorological systems and flood zone management. On similar lines both NECS and GNHCS will be required in accessing the entry points for consideration of climate lens in the SDGs/ NKRAs. Following are the key entry points identified:

Entry Point 1:

MoWHS must work closely with GNHCS, NECS, NCHM in order to apply a climate lens to the strategies of the NKRA 15.

NKRA 15: **Sustainable Human Settlements** SDG[6]: **Clean Water and Sanitation** SDG[11]: **Sustainable Cities and Communities** Agencies: **MoWHS, NEC, NCHM, Thromdes, and Dzongkhags, GNHCS**						
Strategies at NKRA level	**Stocktaking**					
	Climate information	**Human and Institutional Capacity**	**Long-term vision and Mandate**	**Governance (implementation/ integration)**	**Participation**	**Monitoring & Evaluation**
● Promoting green and energy efficient buildings. ● Mainstreaming measures to reduce vulnerability to disasters. ● Enhancing access to safe, inclusive and green public spaces. ● Improving	Future impacts of climate change on river flows (low flows and flood flows) for the major river basins in Bhutan has been done ● Conduct detailed	●Strengthen capacities of MoWHS for knowledge and experience in undertaking climate vulnerability and impact assessments	Comprehensive National Development Plan 2030 addresses extreme climate events	NAPA I and II both had flood protection measures to reduce vulnerability to climate induced disasters	There is inclusion of local governments/ communities for developing flood control measures, risk and hazard assessments.	● GLOF and Glacier level data is available but may need updation. ● Not all disaster vulnerability/ risk indicators are systematical

efficiency and effectiveness of Thromde and municipality services. ● Implementing Comprehensive National Development Plan 2030.	Gewog level disaster risk assessment for water infrastructure ● Engage with NCHM, FEMD and NEC to develop flood hazard assessments and maps	●Knowledge of and experience in understanding, assessing and interpreting outputs from NCHM data				ly collected and updated

Entry Point 2:

Similarly, in this case, MoWHS must work closely with GNHCS, NECS, NCHM in order to apply a climate lens to the strategies of the NKRA 17.

NKRA 17: **Sustainable Water** SDG [6]: **Clean Water and Sanitation** Agencies: **MoWHS, NECS, GNHCS, MoHCA, NLC, MoIC, LGs, MoH**						
Strategies at NKRA level	**Stocktaking**					
	Climate information	**Human and Institutional Capacity**	**Long-term vision and Mandate**	**Governance (implementation/ integration)**	**Participation**	**Monitoring & Evaluation**
● Building and rehabilitating adequate and climate resilient water infrastructure. ● Improving drinking water quality and safety. ● Providing adequate irrigation water. ● Implementing water legislation and governance. ● Exploring creation of a dedicated water agency.	Engage with NCHM for addressing vulnerability assessments for future national water availability	Strengthen capacities for coordination whereby NEC should create a platform for players to cooperate and interact to systematically plan, implement, maintain and update information, and report for CCA in water sector	There is long term vision and mandate available under Bhutan Water Policy, Water Act 2011	Water Flagship programme has adequate and climate resilient infrastructure as one of its strategy	●Developing Water User Associations for community participation are included in activities ● The dedicated water agency can have participation from various levels of governments, as well as for community and CSO involvement	● The NKRA is translated down to department level KPI, AKRA for MoWHS ● Not all required indicators are systematically collected and updated

4. Conclusions and Recommendations

Adaptation should not be performed in isolation from existing policies (e.g. legislation, funding systems), management structures (e.g. networks) and processes (e.g. in decision making). [18] For developing synergies between adaptation and development it is important to review and modify development actions to cope up with current and future impacts of climate, and include considerations for disaster risk management practices. As seen in the previous section that climate change poses a risk to the achievement of nearly, if not all, NKRAs. NAP can be a route to coordinate and implement the adaptation component of these national key result areas.

It would provide greater benefit to address these risks through stocktaking success factors. An effective development plan, that also addresses climate risk requires a strategic effort. It requires:

1. Adequate collection and sharing of climate data including both an understanding of climate risk and potential action;
2. Having a strategy and long-term mandate to guide the process of including climate adaptation;
3. Inclusion of diverse stakeholders onto the same platform;
4. Examining implementation strategies and level of integration of climate in development planning; and
5. Monitoring and evaluating the actions.

Underpinning all these actions is the need for financial and human capacities to undertake each of the required adaptation actions for each NKRA/SDG. In order to utilize the possible entry points to include NKRA aspects into the NAP, looking at success factors in the stocktaking level, steps may be taken. A good first step is to recognize where there may be overlap and synergy from the budgetary/ financial angle (e.g. Climate Public Expenditure and Institutional Review).[19] Further some of the key tools to integrate the areas are:

- Development of common Indicators for M&E, so that NKRA indicators can also act as vehicles to report to UNFCCC.
- Aligning budgets and integration of climate change in all departments
- Develop a comprehensive long-term capacity building strategy that includes both sustainable development and climate adaptation
- Use specific decision and analysis tools to prioritize adaptation measures:
    - multi-criteria analysis MCA
    - cost benefit analysis
    - financial analysis
    - gender analysis
    - real option analysis
- There is also scope for employing Environmental Impact Assessment (EIA) procedures as a vehicle for enhancing the resilience of projects to the impacts of climate change.

However, a key barrier is the availability of detailed information on the historical climate, as well as specific scenarios of future climate for Dzongkhag or Gewog level in Bhutan. In many jurisdictions such information is currently not available.[20] This hampers from designing some of the key tools in the context of Bhutan. Nonetheless, several entry points are available to incorporate climate change impact and adaptation considerations. Several national and sub-national authorities as well as multilateral development banks have already made some progress in terms of examining the possibility of incorporating climate change impacts and adaptation measures within the context of EIA modalities.

[18] http://www.environmental-mainstreaming.org/documents/OECD%20-%20climate%20adaptation%20&%20EIA.pdf
[19] https://www.undp.org/content/dam/undp/library/Climate%20and%20Disaster%20Resilience/FINAL_NDC-SDG-9Nov.pdf
[20] http://www.environmental-mainstreaming.org/documents/OECD%20-%20climate%20adaptation%20&%20EIA.pdf

Annexure 1: Group work results

During the SDG workshop, these were the identified needs and their corresponding level of intervention for the success factors as defined earlier.

NKRA	SDG	Needs at Stock take level				
		Climate Information	**Long-term vision and Mandate**	**Governance (implementation/ integration)**	**Participation**	**Monitoring & Evaluation**
Macroeconomic Stability	8	● Vulnerability/ impact studies to understand climate change impact on Bhutan's economy				
Economic Diversification	8,9	● Vulnerability/ impact studies to understand climate change impact on tourism sector. ● Climate resilient/ low carbon tourism as adaptation option	Develop a mandate on Climate resilient tourism			
Reducing Poverty and Inequality	1,10	Vulnerability/ impact studies to understand climate change impact poor/ vulnerable sections in Bhutan			Develop arrangements to include poor/ vulnerable groups in planning/ implementation of NAP	
Culture and Tradition Preserved and Promoted	11	● Vulnerability/ impact studies for historical structures, risk mapping ● Guidelines/Manuals for climate resilient historical structures				
Healthy Eco-system Enhanced	11,15	Develop Early warning system to detect potential forest fire	Wetland Conservation Strategy with strong policies and regulations	● Payment for Ecosystem Services may be implemented ● Enhance awareness and capacity in tackling forest fire.		
Carbon Neutral, Climate and	7,9,13	● National water resources assessment	Renewable energy strategy /	● Climate change policy	Climate change/projection information	

NKRA	SDG	Needs at Stock take level				
		Climate Information	**Long-term vision and Mandate**	**Governance (implementation/ integration)**	**Participation**	**Monitoring & Evaluation**
Disaster Resilient Development Improved		(contribution from glacial melt and future water resources availability) ● Multi- Hazard Early Warning Services for Building Resilience to High-Impact Hydro-meteorological Events	master plan and strict implementation	National Hydrological and Meteorological Policy (in process)	available to decision maker for streamlining adaptation	
Quality of Education and Skills Improved	4	Develop climate change curriculum				
Food and Nutrition Security	2	Drought and flood index studied and early warning in place		Implementing Climate smart agriculture		
Infrastructure, communication & Public Services	9,16	Vulnerability studies/ assessment of infrastructures, e.g. power transmission lines, communications		● Develop guideline on development of all-weather roads ● Provision of chopper and other high-terrain emergency services		
Gender Equality	4,5,8	Technology adaptation particularly gender friendly technology and innovate such technologies	● Need for a strategy or assessment of other vulnerable section (disabled/old) of the societies as a result of climate change ● Implementation of disability policy			
Productive & Gainful Employment	8	Identification of climate resilient entrepreneurship opportunities/ Green jobs	Revisit and strengthening of policies such as	Implementation of policies with high employment opportunities		

NKRA	SDG	Needs at Stock take level				
		Climate Information	**Long-term vision and Mandate**	**Governance (implementation/ integration)**	**Participation**	**Monitoring & Evaluation**
			Tsamdro	like CSI, tourism policies		
Vibrant Democracy & Decentralisation	16		Contingency plan	● Strengthening implementation of annual grants - inclusion of statements of climate adaptation provisions		
Healthy and Caring Society	3			● Education and awareness- climate sensitive diseases.		Monitoring and sensitization of emerging vector borne disease.
Sustainable Human Settlements	6,11	Conduct detailed Gewog level disaster risk assessment.		● Monitoring and building energy efficient infrastructure ●.Alternative water sources and catchment management.		
Justice Services	16		Develop and strengthen Forest fire Management Plan.	Strengthen search and rescue capacities.		
Sustainable Water	6	National water resource assessment to be conducted.				

Annexure 2: List of participants

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Annexure 3: Photographs


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